

ABSTRACT OF THE DISCLOSURE

Disclosed are a frequency modulation apparatus and a frequency modulation method for generating an image clock that is used for turning on/off a laser beam that scans an image bearing member, such as a photosensitive drum. The frequency modulation apparatus divides, into a plurality of segments for each pixel, a main scan line on an image bearing member, and calculates auxiliary clock periods based on a reference clock period and variable-magnification coefficients corresponding to the segments. Then, the frequency modulation apparatus generates image clocks for the respective segments based on an initial predesignated period value and the obtained auxiliary clock periods. Furthermore, the frequency modulation apparatus includes a detecting device for detecting a difference between a reference value stored in a memory and an actual laser irradiation location, and corrects a shift in the laser irradiation location in accordance with the detection results obtained by the detecting device.